VOLUME XXXVII, No. 5 FEBRUARY 29, 1940

THE JOURNAL OF PHILOSOPHY

CONCERNING THE CONCEPT OF PATTERN

I KNOW the word "pattern" is used in all sorts of ways and I am both morally and academically against ambiguity of words. Nevertheless I wish to adventure into whatever complex it is that this term involves. I respond rather to the call of the wild than to that of philosophy in any customary academic sense of the word.

New dress patterns are constantly announced in the daily papers. Women especially seek to conform to the styles of the current season, thus giving themselves a pattern by which their photographs can be subsequently dated. Medieval scholastic philosophy has its pattern, as has the political atheism of contemporary Russia. The solar system, the moon, Dante's *Divine Comedy*, Greek tragedy, crabs, elephants, mackerel, maple leaves, each of these has its pattern by which it can be recognized.

Anything that can be identified because of recognizable characteristics has its pattern. An excellent book on anthropology was recently published called *Patterns of Culture*.[1]

I have read next to nothing about this concept. That is why my impressions must be so casual. In the class of patterned things, which includes ideas, we can distinguish between temporal objects, such as processes, sustained acts of will, methods of procedure, and timeless objects, like the pattern of a wall paper. Thus temporal processes are patterned in so far as they can be identified, classed, and named because they correspond to some characteristic mold or picture. Religion, mysticism, science, have their patterns as have superstition, individual sin, social revolution. The intellectual problem about such objects is, what is the pattern it is expected to conform to, what is the pattern we use in trying to conceive the thing, or attend to it as a specific object?

Now if identification, reaction, labeling an object, whether it be temporal or changeless or both, depends upon what pattern we happen to use, then what we have on our hands or find or discover physically or conceptually depends upon an if-then relation, and this I shall assume to be the basis of inference when there is any.

I have next to no acquaintance with the dialectical complex called logic, so I shall use the word naïvely in the simplest sense, as

[1] By Ruth Benedict.

illustrated by the assurances about the mortality of Socrates, viz., that he must conform to the pattern he shares with others like him. And this reminds me of the simplest description I have come across of the Aristotelian syllogism. I quote from Sidgwick, who says:[2] "The simplest and clearest definition of a syllogism is that it is the process of reasoning which consists in applying a *general rule to a particular case.*" And the particular case is more than individual when the if-then control is brought to bear upon it; it is an instance of the pattern whose authority is appealed to.

I am sure you see that all I seek is to find a new phrasing for the designing of purposive behavior that is not altogether in confusion, that has some pattern, whether it be said by others to exemplify superstition, mysticism, or science. I say, then, for the moment, that what we call intelligent behavior, however dictatorial and egotistic, is conforming to the pattern we seek to apply to our particular case. The kind of behavior that clings to the technique of cause and effect because of its efficiency in a human temporal action or sequence of actions is applied logic, which functions instrumentally in a universe of discourse. It differs from pure logic as applied mathematics differs from pure mathematics.

I may seem to urge that because all planned or logical behavior is temporal, all temporal sequence is planned behavior. But one thinks at once of so many instances of temporal patterns that are not planned except in some poetic or figurative sense: the solar system with its group of moving planets, the migration north and south of buffaloes a century ago, the coming of salmon in the spawning season, the pattern of life beginning with conception, passing through infancy, youth, maturity, old age, until inevitable death, the sequence of seasons on the earth where man must live and to the pattern of which his own life-pattern must conform.

Today, with such machinery of transportation, moving so many kinds of food and furs and fabrics from almost any part of the world to nearly any other, we have lost the economic sense of the change of seasons. But before the invention of the steam engine not many years ago the farmer had to be patterned in important respects like the competent technician or engineer. He had to know how, where, and when. Like the surgeon, the chemist, the architect, the farmer had to pattern his industry in conformity with the pattern of nature or with some of it, working through month after month guided by a program of contrasting and recurring seasons as the Indian of a hundred years ago had to, and as the Eskimo must still do. Even today, the pattern or the many patterns of nature are the economic map that humanity has to conform to, though man has invented many tools to eliminate its contrasts. If nature did not stick to its

[2] *The Application of Logic*, p. 22.

repeating pattern it is hard to see how any creatures, animal or vegetable, could live at all, much less how any program or methods of its industry could be planned. To the ancient Egyptians, how supremely important was the annual overflow of the Nile; to the Indians of the plains how important were the migrations of the buffaloes north and south, parallel to the migrations of wild fowl.

II

But I must venture a word about the if-then patterns of the non-temporal; and I have mentioned the decorative patterns of wall paper as an example.

Wall paper is, of course, a tool, like a plough or a bow and arrow. It is manufactured primarily to cover a wall, which is sometimes the wall of a study. Now I am selecting a wall paper for my study, and my choice is guided by the if-then patterning of the surface I shall contemplate when I consider the hard-boiled problems of philosophy. I describe the picture content of every surface of four square feet, the decorative or descriptive pattern as contrasted with the functional pattern. On the wall paper I am ordering, the same picture occurs over and over again, each detail of each picture just so many inches away from the same detail of a duplicate picture above and below. Each picture in duplicate shows the full moon shining upon a ruined castle and eight inches to the right is a poet playing on a lyre. There are some weeping willows and a waterfall, and a few other details, a drifting cloud and a bird. It is this picture repeated without end, always of the same size and content, that gives the wall paper its syllogistic pattern, like the demonstration that Socrates must conform to a pattern of nature and as the poet must conform to the pattern of the wall paper. Since every detail of the wall paper's decorative design is a repeating detail of the same non-temporal pattern, it is what it is by virtue of an if-then law; the poet could not be replaced by a flower or the waterfall by a fire engine. This if-then of the stationary non-temporal, what Sidgwick calls "the application of a general law to a particular case," may seem of no significance at all compared to the syllogism of efficient, successful behavior, but is it not like the established and repeating pattern of nature? And I do not forget that once there were no British Isles and no straits of Gibraltar, and that many types of living creatures no longer exist. And is it not the syllogistic pattern of nature to which the syllogistic pattern of behavior has to conform, and without which behavior in the sense of adaptation would be inconceivable?

III

I may seem now to change my subject matter. Perhaps so, but any change of scene is a relief.

In his work, *Primitive Mentality*, Lévy-Bruhl insists that what he calls the logic of primitives is a very different type of logic from anything we are accustomed to. This has been much disputed by anthropologists and it may be that their objections include what I am about to say.

Lévy-Bruhl means, I think, that the so-called primitive mind or imagination is furnished with an entirely different apparatus; the primitive lives in a world saturated with spontaneous and inherited superstition, with "mysticism," with supernatural powers, with magic, animism, witchcraft and medicine men, group habits that proclaim most curious superstitions, a social universe of discourse that we could not conceivably build up out of any inferences that we can imagine.

The Frenchman I refer to and whose work I much admire, makes, I think, a misuse of the word "logic." How the collective mentality acquired this extraordinary apparatus we can, for the most part, hardly guess. This field of research is to me so interesting, partly because it is the womb and cradle of the history of philosophy, that I am tempted to cite instances. The first one is not from Lévy-Bruhl, though I am sure he would accept it. Natives of Ashanti perceive large trees just as we do, but they apperceive them very differently. It is not primitive logic, so far as there is any, that differs from ours, but primitive apperception. To the native's perception the big tree is a big tree, but to his apperception it is or may be the habitation of a spirit or a power; the native makes sacrifices to it of food and drink. And when the tree is to be cut down to make large drums of its wood the process of cutting down the tree must conform to a complete ritual. It is this superstitious understanding of the tree and reaction to it, and to a host of other things, that makes the primitive seem of so different a mentality in all its functioning. The pattern of behavior here described contains two parts, the nature of the tree which functions as a postulate, and the behavior which is adapted to it and which seems to be of the if-then type. We may call it a "mystical" postulate, collectively established. Our world is full of this sort of thing wherever there is doctrine without curiosity. A sanctified instance is the miracle of the Mass, the transformation of the wafer and red wine into the body and blood of Christ, and partaken of by accepted members of the faith who have recently been to confession. An illustration that I like comes at the beginning of the introduction to *Primitive Mentality* (the author has written other volumes on the same theme); he quotes from *Relations des Jesuites*. A missionary writes:

> We are forced to the conclusion that the Iroquois are incapable of reasoning, like the Chinese and other civilized races to whom we set forth the belief in God and

> His Truth. . . . The Iroquois is not influenced by reason. His direct perception of things is the only light which guides him. . . . They usually believe only what they see.

What the Jesuit writer meant was that the Iroquois would not accept as postulates of faith what were established propositions of another culture. The missionaries to South Africa report the same incorrigible attachment of natives to their own culture. "I will go up to the sky first and see if there really is a God," said a poor Mosuto proudly, "and when I have seen him I'll believe in him" (p. 23). Again: ". . . we quote the actual words of the missionary W. H. Bentley, who was a keen observer, and who summed up his experience as follows: 'An African, whether negro or Bantu, does not think, reflect or reason if he can help it'" (p. 27). Mr. Bentley was, however, a missionary, with substantially the same universe of discourse as the Jesuit missionaries in North America, whose mission, like his, was to introduce a trait characteristic of their own culture into another and very different culture.[3]

Bentley tells how

> it took a very long while before we found out the reason for this keen desire [of the natives] to learn to read and write. The natives, when they carried produce to sell on the coast, took it to the buying store of the factory. When it was weighed or measured, the agent made a few marks on a piece of paper. They then took the "book" to the agent in charge of the barter store, and he handed out the payment. . . . They concluded that if they could write, they need not trouble to take produce to the factories, but they had only to make a few marks on a piece of paper (as the first agent did), and on presentation of it at the "fetish,"—as the barter store of a factory is called—they would obtain all they wanted. Hence the desire to know how to read and write in San Salvador. [P. 28.]

Notice that the natives *concluded* that *if* something, *then* something else that was desired. And the primitive mentality is frequently declared to be very superior in other respects. Whether the missionary's vocation, i.e., his major premise, is to instill the logic of Buddha, or of the Church of Rome, or of Karl Marx, makes no difference as concerns the nature of what is being done or how.

As to the statement that natives believe only in what they see, this is true according to observations only of cases that contradict their own native postulates. "Livingstone tells us that he often found matter for wonder in the incontrovertible faith of the negroes of South Africa in beings whom they had never seen." Prolonged and careful observation has regularly "revealed the existence of an almost illimitable field of group ideas relating to things not perceptible to sense, such as invisible powers, spirits, souls, *mana* and so on." "The primitive makes no distinction between this world and the other, between what is actually present to sense and what is beyond.

[3] M. Lévy-Bruhl, in a recent work substitutes apperception for perception.

He actually dwells with invisible spirits and intangible forces" (pp. 31–32).

Here is an example of primitive logic used for controlling a situation that threatened to get out of hand. Unfortunately it demands a bit more space than I wish it did.

A way of arousing emotional reaction, tempo, rhythm, is use of a well-known "instrument" that seems to confer its own type of stimulus-value. The dance, whether ritual or "profane," music, poetry, could hardly be the experiences they are without rhythm that works automatically its sometimes mystical effect not alone on individuals but the more so on considerable groups. Greek tragedy, always the voice of a religious group tradition, using masks and the theme of the humility of man, is a perfect example of the power of rhythm. Why did both Parmenides and Dante compose in rhythm? And it has long been an established theory that when a dramatic story of some length was related to a gathering of warriors of the "heroic age" or to an assemblage of fellow Greeks at Olympia, it was told in tempo form.

What we are less acquainted with is the similar effect of patterned pitch or intonation on similar occasions, though we can always find it as part of the ritual of the Church of England, and we know how pitch tends to rise when emotion becomes uncontrolled. And as emotion influences pitch, so pitch influences the reaction to it.

Lévy-Bruhl (*Primitives and the Supernatural*, p. 129), speaking of the emotions and hallucinations aroused by group dances, writes:

> If we were to account for the intense emotion that seizes and carries away both actors and bystanders during these ceremonies, we must take into consideration, not only the effects produced by the movements and gestures of the actors, but also that of the measured dances, the music and the songs.

Speaking of the drum, used not only in group rituals but for soothing patients and driving away evil spirits, he writes:

> The drum, then, independently of its psychological effect, well known to the natives, exerts a real mystic influence. It acts upon the dispositions of unseen beings as it does upon those of human beings. It is thus the necessary accompaniment to all the ceremonies in which the group feels itself in contact with invisible supernatural powers, and is endeavoring to gain their favor. From the mystic point of view, the drum is an indispensable part of the magico-propitiatory apparatus.

He quotes Basden (*Among the Ibos of Nigeria*, 1921, pp. 192–193) who says:

> The more one listens to native music, the more one is conscious of its vital power. It touches the chords of man's inmost being and stirs his primal instincts. It demands the performer's whole attention, and so sways the individual as almost

to divide asunder, for the time being, mind and body. Under its influence and that of the accompanying dance, one has seen men and women pass into a completely dazed condition, oblivious and apparently unconscious of the world around them.

And he quotes Rasmussen (*The People of the Polar North*):

As a matter of fact, each person becomes so completely absorbed in the dance that any interference would give rise to emphatic protest and annoyance. I have watched such dances and can testify to the extraordinary manner in which the dancers, for the time being, lose consciousness of their surroundings. One stands before them and they give no sign of recognition; one speaks but there is no response other than a fixed stare. Only gradually do they become normal again.

François Valdi (*La Femme-Antilope*, pp. 161–163) describes a scene of this sort. I quote from a passage cited by Allier (*Magie et religion*, pp. 37–38).

Then a great cry arose from the crowd, at the same time a cry of triumph and of consolation. The man with the tam-tam came toward his comrades, made his way through them to the empty space. His features convulsed, his eyes looking mad, his body trembling with a bestial frenzy, he began to dance. His feet beat the earth swiftly, his body bent and twisted, and from his throat issued harsh meaningless cries. And when all the natives present . . . having surrounded him, had begun to dance, turning in unison, a sort of inspired delirium possessed them. He dropped his tam-tam, his mouth foamed, and his arms made gestures. . . . Fortunately Cocora [the one with power of command] had kept his self-control. Like myself, he feared his men might go to excess. I noticed that he paid close attention to the movements of the dance. Suddenly he picked up the drum and threw himself into the melee. I thought he too was possessed but soon I saw his purpose.

Responding to the rhythm of the instrument, the whirling mass brought its movements little by little into coördination. Without ceasing to dance and cry, the members of the savage ballet took on the form of coils of an enormous serpent. The rhythm of the tam-tam grew swifter, and the human beast now under control, obeyed. Slowly it uncoiled itself, and began to march behind its chief . . , crossed the camp, reached the trail and was only a dancing black spot on a screen of grey dust. It had long disappeared when I still could hear the ponderous sound of its march and of its inexorable voice.

Cocora had paid close attention to the early stages of the dance when it became hysterical. His purpose was to prevent the occurrence of something analogous to an unsatisfactory harvest or a badly constructed building. He knew how, where, and when. He had his method of control by conformity to postulates learned by experience. Here, then, is an instance of the pattern of behavior guided by purpose and intelligence, the voice of the universal Logos, later (culturally) to be inscribed on a temple at Delphi, and to be baptized academically as The Golden Mean.

The authority of the primitive dream is not disputed by those who have this revelation of what is to them Reality. It is the empirical observation of a soul separated for a time from its body,

observations that lead to planned reactions as logical as any could be.

The Arabs, when being cursed, sometimes lay themselves down on the ground so that the curse, instead of hitting them, may fly over their bodies. (Westermarck, *The Origin and Development of the Moral Ideas*, I, p. 57.)

An endless number of similar examples of primitive logic can be collected by anyone, and they suggest what might be called a naturalistic metaphysic of inference.

An excellent example of logical control is in *Symbolisme et âmes primitives* by Caillet, who describes the mentality of natives of Madagascar with whom he was thoroughly acquainted and whose language he spoke easily. He has been discussing the widely spread notion that the efficacy of a word flying from speaker to the one that hears it, is like that of a stone from a sling. He writes (p. 118):

> Among primitives [of Madagascar] the word is the agent. This produces amusing results sometimes. I had had occasion several times to reprove a Malagache who was very imprudent; in fact my prophecies had been realised more than once. Do not think however that my words had borne the fruit I hoped for. One day as I was repeating a warning something like "Look out; if you do this it will happen that. . . ." The native didn't let me finish my sentence, but with a violent gesture, pressing his hand against my mouth, he exclaimed: "Don't say that, Prophet. Your words have already caused me trouble enough."

My next illustration is from a most interesting book.[4] I am speaking of cultural patterns and what I call the logic of behavior, without which such patterns, I think, could not exist. An incident from the Eskimo culture is a fair illustration, and very amusing.

> In the same community [in Greenland] lived Uvisakavsik, a great hunter and important citizen, but one who had lost the respect of his people after he had returned from America, where Peary had taken him following an expedition to the Pole. It was evident to everyone that the man had taken leave of his senses. When he came ashore he lost no time in telling most incredible yarns.
>
> He said that he had seen people living in big houses on top of each other, like auks in the bird cliffs. His audience let that pass. Perhaps Uvisakavsik had made a mistake. But he also told them that he had seen more ships in the harbor of New York than there were icebergs in the fjord. Smiles flicked the corners of his listeners' mouths. How could anybody get wood enough to build so many ships? Then he related that he had seen real houses move on two iron bars, houses bigger than any tent, with walls of glass. Inside the houses sat many smiling people not in the least worried over their fate. Suddenly the whole house began to move away, and Uvisakavsik had seen no fear on the faces of the unfortunates trapped inside. While he had meditated this marvel, he had seen several wagons roll past. There were neither dogs nor horses hitched to them, nor was there any smoke coming from them to account for the movement, as there was from ships. . . . Uvisakavsik kept on. He had viewed so many houses that it was impossible to see past them into the country. The paths between

[4] *Arctic Adventure. My Life in the Arctic* by Peter Freuchen, p. 50.

these houses reminded him of clefts in the mountains. Even the roads were made by human beings and covered with a smooth material which was neither cold like ice, nor transparent.

His audience was plainly uneasy now. This was too much. And when he persisted, on top of everything else that he had talked into a little handle that carried his voice through a tiny thread to Peary who was, at the time, several sleeps away, and that Uvisakavsik had spoken clearly to him without being forced to shout, his sentence was settled.

Wise old Sorqaq, medicine man of the tribe, stepped forward and addressed the newly arrived man solemnly: "Uvisakavsik. It appears that you have been far away and no longer know the truth. Go to the women with your lies."

After that he was never believed. A big liar, an undependable man.

Naturally the man who had seen more than Main Street believed in, developed the complex of *hubris*. He became unbearable.

He told of the meals he had eaten in the whiteman's country, of seeing piles of bread higher than the meat pile, and of certain places where no meat was eaten at all. . . . Then he said he had seen berries hanging from trees high above his head, and he had only to shake the trees and the berries fell into his hand. Of course everyone knew that there were tall trees, but saying that berries grew on them was absurd.

Uvisakavsik was shot and killed under regrettable circumstances.

One might say that the mentality of Main Street is to believe only in what one is accustomed to. One does not study primitive culture to find that. The primitive adapts himself to the culture pattern of his tribe. That is how he and his fellows constitute a culture. Every primitive social group has its pattern of behavior. Certain phenomena are interpreted, explained, apperceived in the same way by all members of the group. Each group, unless mentally disintegrated by missionaries or foreign traders, has its collective superstitions. Is there any more collective apperception than the Roman Catholic doctrine of the Mass? Calvin's doctrine of the necessity of Christian baptism to save an infant from Hell, the ideas of the Vicar of God and of divine predestination, in so far as firmly believed, are of the same type, also the idea popular not so long ago that evolution is Providence taking time. Among primitives and primitive is a vague term of which there are many grades—theories of birth and death, of continued life of the spirit after death, the experience of dreams, the techniques of magic, the *rites de passage*, an endless list of examples that any reader can easily find—these need not have been arrived at by any process of logic, but they are postulates of procedure. Customs of all sorts are socially obligatory because of certain collective faith-postulates that must be conformed to. Certain events demand certain behavior when they occur. Some of the Christian sacraments, every patterned procedure that can be called a ritual, every technique of magic whether black or white, is the application of a general rule to a

particular instance. If a native conforms to the knowledge that it is unwise for him to walk on a trail when the sun can cast a long shadow of his body, he acts as logically as does the atheist who buys an overcoat in December, or the Christian who goes periodically to confession.

Every culture is a living pattern and every such pattern is the constant application of collective postulates, using them as tools as the farmer uses a plough or a tractor. Such patterned behavior would seem to be of the logical type, often habitual and unconscious of motives. Whether the action be the conscious and emotional acts of ritual or the conformity to habit unaware of motives, the pattern of this conduct can be called the self-consistent logic of behavior, as the faithful Roman Catholic will abstain from meat on every Friday for no reason he can give. Without this spontaneous logic of behavior I doubt whether cultures could really exist, and the more advanced and "civilized" such a culture is, the more it is afflicted with complexities of group living, the more, I suspect, does its spontaneity of pattern become indispensable. It is in the collective superstition, ritual, magic, and religion of a tribe that much of its patterned behavior is to be found. The intense emotion of certain cases of this use of logic in primitive life gives to the practise of it what we have to call esthetic values and stimuli. Thousands of years later perhaps, if growth continues and writing is invented and there is enough progress in science, two types of logic may become distinguished, the logic of the scientific engineer and the logic of the logician absorbed in the mysteries of symbolic reasoning about what is sometimes called nothing at all.

IV

The logic of primitive group behavior brings us to the patterned group life of such creatures as beavers and bees.

Beavers live as coöperative members of their group. They build a dam of astonishing perfection out of sticks and boughs. They accumulate, by cutting them down with their teeth, a capital of slender trees with tender bark and store it at the bottom of the pond in the deeper water above the dam, so that when the upper part of the water freezes, the beavers who have made the dam have access to food. They build a house of mud with a floor just above the level of the water on which they can stretch out. Perhaps they are aware of what they want and what they are about. The whole enterprise is for a common good, and it seems to me that we have here, in any case, what we may call the logic of a patterned behavior.

What we call nature presents nothing perhaps so socially patterned as the life of the honey bee, no other such example of what

might be called spontaneous teleology, whether consciously purposive or not. The life of the bee as member of a nation, since no hive takes any interest in any other hive, involves the life of a social group whose organization as a behavior pattern equals for social intricacy perhaps anything Plato ever thought of.

The sketch by Maeterlinck called *The Life of the Bee* is a very popular, somewhat sentimental, sketch, but he knows his subject. He divides the substance of his book into six parts called "The Swarm," "The Foundation of the City" (meaning the physical habitation with its architecture built by the bees), "The Life of the Bee," "The Young Queens," "The Nuptial Flight," "The Massacre of the Males." The bee's life is an if-then career designed by nature and by nothing else. Zoölogy presents many other instances of the group pattern; and, though beasts of prey, the leopard, the African lion, who because they are beasts of prey live by themselves, also show their logic of behavior, probably a conscious one. Using the word "logic" in the service of the if-then characteristic of a descriptive pattern, we find it in botany, in zoölogy, as well as in primitive and in more advanced society.

This is to say that every patterned specimen of life shows the if-then characteristic, shows it as a constant character, inevitable in every specimen of its type.

V

Does all patterned living show the if-then characteristic? If it shows the same pattern as a constant character, I suspect it must do so. Take any treatise on general zoölogy. It is always devoted to the description of characteristic types and their patterned variations including the physical constitution or anatomy of a pattern and the types of biological behavior resulting from it. There may be also more than this, but there must be this to begin with. Any creature that corresponds completely to this description of pattern is thereby, whatever it is, a vertebrate or an invertebrate of some particular species. A conservative Christian might insist that all the aspects of nature are as its creator meant them to be, and that all the patterns that biology reveals, reveal details of the Creator's plan.

Thus, though it may sound irrelevant and picturesque, we might say that the logic of the behavior of nature determines the logic of human behavior in so far as the postulates of this latter logic are not postulates of superstition.

Can emotional life be described as patterned? I do not mean that all emotional life is patterned, but is some of it patterned?

There are what may be called mass emotions, social emotions,

collective emotions. Just after the great earthquake at San Francisco in 1904 a mass of people happened to be assembled in front of a church. There was a strong collective desire to pray. Considering the intensity of strain they had been enduring, and the collective character of it all, this is not surprising.

The primitive emotion of fear, fear of ghosts, of enemies, of natives that have taken on the form of savage beasts, the emotion of those making a sudden attack upon a sleeping village, the emotion of ritual dancing and of non-ritual dancing, of those receiving messages at a seance from their departed, the emotion of many at Catholic communion after confession, religious emotion, patriotic, artistic emotion—nothing is more personal, more intimately private than emotion. Yet for spontaneous social living I suspect nothing is more important. And if this is so, if emotional reactions to things in a patterned environment play into and stimulate the patterned logic of behavior, I suspect it is because emotion too has its pattern and its logic, and that without it the fuel would be lacking for the logic of what is still sometimes called the higher life.

VI

We often make the distinction between pure and applied mathematics. I mention the no less obvious distinction between pure and applied logic. Any use made of any bit of knowledge because of its known efficacy under typical circumstances that must now be faced is a case of applied logic.

When there is a weakened heart, brandy in a specific quantity is often recommended, so that it may function as a tool to accomplish a clinical purpose. It may be taken in the form called brandy and soda. In many cases it will be prescribed as something to be used according to some pattern of procedure. Assuming that the brandy is prescribed by some one that understands the use of it, the way it is used is the method of one that knows why, how, and when. A rule of procedure is applied to a particular instance.

The one who absorbs his brandy and soda may, however, not be a patient at all and his partaking of it may be motivated by quite other considerations. To be sure he may still be applying a general rule to a particular case, but in a different sense. For to treat the brandy and soda as a beverage only is not to treat it as a tool valued for its efficacy upon the heart. What is consumed is now an esthetic object, "a drink." Whether he that partakes be a patient or a connoisseur, what he asks for is a brandy and soda, and admitting that in each case it is "used," admitting also that he that partakes may be in each instance of the patient type, in the one case to make the future better, in the other to make the present seem

better, none the less the two aims are different in that the second aims at an esthetic transformation of the present. I grant, however, that the two latter cases are much alike, since in the latter case, if a case of emotional depression, the beverage is also a tool.

This illustrates part of the contrast I have in mind, viz., that the same terms, "brandy and soda" and "logic" may have different meanings which ought not to be confused. But this does not illustrate all, so I must find another.

Horseback riding today is an aristocratic sport among the prosperous, and is still something of great importance to the so-called cowboys of the West. The use of horses had, however, we may presume, a very different beginning. In the paleolithic epoch of southern France the wild horse was wild game. But the horse was probably first tamed in prehistoric Asia, and we may safely believe was first ridden by primitive warriors, especially by their chiefs. Whether the use of horses for riding began in this or in some other way, it certainly did not begin in a way resembling riding as a luxury or a pastime as we see it in city parks today. The Sunday supplements often have pictures of horse shows, of handsome young women on horses leaping over high hurdles. Horseback riding too might be prescribed as exercise, but taken for its fun and stimulation it is prized for esthetic values, something essentially different from its use by American Indians in hunting buffaloes. And here, too, often enough, there is today a double motivation, each of which aids the other.

One other illustration. How mathematics was born, what was its primitive cradle, I need not ask, but one of its early uses was the determination of portions or spaces of land in ancient Egypt, something calling for a located society and not for the life of a wandering tribe. Another was the geometrical designing of pyramids, meant to function eternally as tombs. And another was the architecture according to a fixed pattern of the stepped temples and palaces of Babylon. Mathematics is still an indispensable tool, but is it always necessarily and exclusively a tool? That depends, it seems to me, on whether it is used as tools are used. Go into any art museum where there is a collection of medieval armor and weapons. The armor that one finds was designed and made to function as armor in war or tournaments. Is it today armor, or curios of use for the better understanding of history? One sees many beautiful Renaissance swords, many Chinese and Japanese swords of a superb beauty and craftsmanship. They could, of course, still be used as swords, but they were not assembled for that, yet they function in two ways, as a tool for education and as esthetic objects. They are tools in that they are meant to illustrate a detail of the

culture of their time and place. The value both in the illustrative and the non-illustrative way is enhanced by their esthetic values of exquisite design and craft. In this they are like Greek vases, Greek coins, the windows of the twelfth and thirteenth centuries in French cathedrals, illuminations of old manuscripts, and frescoes of the early Italian Renaissance. What was once the ornament and weapon of a knight and gentleman, what was clay pots for manipulating water and wine, bits of metal to facilitate the exchange of commodities and services, different tools, each with its own use, have lost their original utility and acquired perhaps quite another. In many cases most if not all of their value today is their esthetic content.

Anything that was born in prehistory, the use of horses, surveying, architecture, mathematics, and has come to us as a heritage with a history perhaps of more than five thousand years, may have undergone transformations of more than one kind. The kind I have in mind is change of function from the tool to the esthetic object. A pyramid, although its tool importance was that of an enduring tomb, yet was so superbly grand a thing for its owner to look upon, so uplifting a symbol of his kinship with the gods, that to him more than to others it must have been an esthetic object of supreme consequence. Yet to say that a pyramid of the second Empire is today what it was built to be seems surprising. It has become a curio, a detail of the Egyptian landscape, but how many that see it know that it was built to be a tomb to last without end, to be a habitation of the spirit when it would return to enjoy the periodical sacrifices made by relatives and offspring. So far as what it is depends not on what it once was in the imagination of another culture of four thousand years ago, but on what it is conceived to be today, it has become a very different object, for the word "tomb" means today no longer what it used to mean.

The instances I have cited show the earliest strata of the practical, the tool, what I like to call the thing of future or consequential value. Later was generated somehow the non-tool, the esthetic, what I like to call the thing of now-value of the same object as contrasted with something of use in the aid of plans, hope, enterprise, values to be achieved tomorrow, in the after life, or in the life of a child. A value sought and labored for becomes when achieved a now-value while it lasts. When a tool, however important when first designed and made, loses its original efficacy, all the value it can have is the now-value of an esthetic object if it has the qualities of uniqueness, charm, curiosity, or illustration. Many things that are now-valued property of museums of fine arts were once tools designed to serve the application of logic to particular cases that called for the use of method and efficacy.

I know next to nothing about the recent new types of geometry and symbolic logic so I can not speak with any confidence about how these creations were motivated, yet I ask one question. Were the inventors of the non-Euclidian geometries motivated by an interest in the practical efficacy of their theories when used as applied logic? And were the creators of technical symbolic logic much interested in the possible efficacy of their new logical patterns when used in the field of practical affairs? I seriously doubt it. And in doing so I do not mean to suggest anything derogatory of them.

Whether confirmation by empirical observation, whether utility great or small in some field of engineering is a higher, a nobler, type of justification than the energy of living in a purely conceptual world, is another question, and involves other issues from any I am concerned with. But if these creators of the new logic, of the logic called non-Euclidian geometry, were not motivated by the idea of applied logic, by what were they motivated?

In a general way it is easy to say what stimulated them, drove them on, gave them such inspired energy in handling a purely conceptual universe of discourse. It must have been something rich and splendid that was a part of their intellectual immediate. A great musician, a great mystic, a great mathematician, can be given exceptional energy in similar ways.

I do not wish to seem myself motivated by hysteria, but if those so concentrated on technical discovery are motivated by the appeal of something like energizing creative freedom from tradition, I have to conclude that it is rather the field of now-values than of future or utility values that is of such absorbing interest. I do not say that one type of interest and motivation is better than the other. I say only that they are so different as to call for different names, which should, however, indicate both the difference and the kinship. All I ask for is different names for different things, and merely pure logic and applied logic would do as well as any other. Whichever type of logic one has in mind, one should say, for the distinction is so easy and the kinship so obvious. And this is important in philosophy just now, because for lack of it Professor Dewey's whole conception of logic is, I understand, unintelligible, or nearly so, to most students of discourse. It is a different universe of discourse from the one they are accustomed to.

I have said that the word "logic" can be used and is being used in two senses for which I think the labels "pure logic" and "applied or instrumental logic" could with advantage be employed. And using the word "esthetics" in the larger sense, more akin to the Greek sense of the words "*ta aisthetika*," I shall for the rest of this paper call pure logic an esthetic object. That does not, I think,

make it less a scientific or technical object, though it may seem to contradict the claim that esthetics is neither science nor philosophy.[5] Some objects may be both, or now one, now the other, according to circumstances.

The Greeks wanted a term to distinguish the world of empirically perceived things from the complex of conceptually non-apperceived things, though one of them proclaimed that eyes and ears are bad witnesses. Kant in his use of the term "die Esthetik" had in mind all the experienced world of empirical nature which has the two characteristics of being spread out and lasting quite a while. The presence of beauty was no part of the picture meant to signify the total immediacy of sensed things as contrasted with non-sensed things. In my own phraseology, the word "esthetics" or esthetic data continues to mean the concern about beauty and its opposite, but I find myself driven more and more toward the more comprehensive notion of the Greeks.

Concerning recognition of a greater likeness or affinity with the Greek concept of *aisthesis*, I find I have already said something of the sort in the text of two footnotes above referred to. Nevertheless, I am disposed to repeat, after a fashion, for which I beg the reader's pardon.

I am sure that a fairly empirical description of the totality of that sphere of human experience that is marked by attitudes of like or dislike, of being attracted or repelled, stimulated or discouraged in degrees however slight and delicate, would contain far more detail than has ever been dreamed of by anyone trying to picture the esthetic spontaneity of living. The typical data one would wish not to overlook is so endless that any attempt to mention all of it would be futile from the start. It would be Puritanically misleading to conceive as relevant only what "refined" and "cultivated" people would write essays about or discuss in conversation. If we accept provisionally the word "spontaneity" as characterizing the experience in question as well as any word is likely to, rather than its objects, there is the experience of dreams, the shading of life that men like Freud have studied, there are all the qualities of the inferiority and the superiority complex. There is the normal love of a mother for a son, of a father for a daughter; there is passion in its most egotistical vulgarity and in its inspired loyalty to ideals, there is both mortification and pride, apprehension and the will to overcome.

The words "feeling," "emotion" are too obvious, too emphatic, except for part of this great field, although each of these words can signify what is beautiful and what is horrible; and we must remem-

[5] The thesis of my second footnote in "Footnotes to Aesthetics," this JOURNAL, Vol. XXXV (1938), pp. 113–127.

ber that we are concerned here not with man-made works of art but with experience in a larger and more subjective sense, including what is transitory and dependent on moods and reactions. It includes also what is offered to the public to admire and to buy, and what is kept discreetly out of sight with an esthetic passion for secrecy.

Without spontaneity, feeling, emotion, or the energy that makes for color and action both in the realm of biological opposites and of absorption in business, literature, science, of the statesman, of the missionary living only his superbly ignorant and superstitious dream, of a great dramatist, often of an actor, of a musician, of a poet whether like Byron or like Milton, and the millions of souls that get their share of it by contagion—without all this what would life be worth, though much of it is kept with discretion in a sort of shrine behind its seven veils. And it includes the happiness of sane companionship, sometimes shared by those who have never seen each other and who never will.

A biography has just been published called *Cardinal Merry del Val.*[6] The reviewer of it (*Times Literary Supplement*) says of the future Cardinal: "He escapes from his governess to join a funeral because he wanted to go to Heaven with that dead man. He became proficient at tennis and cricket, a good shot and a daring horseman, to test his vocation and make his sacrifice the greater on entering the ecclesiastical state." Is this an instance of a controlling wisdom or of esthetic spontaneity? I believe it is chiefly the latter. And there is St. Francis and Napoleon.

And there is the field of wit and humor of infinite variety, of irony and satire, of the Protagoras of Plato, of Aristophanes, of Molière, of Voltaire, of Lawrence Sterne, and of so much of our daily living than which nothing is more spontaneous or more resigned; of Boccaccio, of much of Shakespeare, of the best comedy of today. And there is the fascination of any field of science studied for its own sake without any thought of its utility, studied for the "beauty" of its subject-matter. There can always be, and as a type of experience there should be, the personal joy and satisfaction of the energizing mind, of aiding and guiding a younger generation. Whether the work be dialectically pure or pragmatically corrupt makes no difference here. This is not the purely intellectual study of existential or other data, or of something functioning as a tool without a halo. What I refer to is not an aspect of science but an aspect of the study of science. It belongs to that region of personal individual values, nearly mystical sometimes, that can hardly be put into words, but which is often the driving force of genius in science, architecture,

[6] By Monsignor Vigilio Dalphiaz; translated by a Benedictine of Stanbrook Abbey. London: Burnes Oates.

poetry, and philosophy. It is a fact in all that immediate and transitory surface and scenery of experience that the word "esthetics," as a subject-matter, so nearly means.

Concerning the two types of logic, the applied, the instrumental or functional, and the dialectically "pure," a little more can be said. Pure logic, like science and philosophy, is phrased in terms that do not refer to individuals, but to types; esthetics for the most part is concerned not with types or rules but with individual existences. Logic, unlike esthetics, i.e., the subject-matter itself, must be kept independent of the student's subjectivity and personal equation. For esthetics these are of primary importance. As to the study of logic being motivated, finding its fuel in the enthusiasm of the student of it, in his "sense of beauty," that is no less true of the study of any science or philosophy. It can be equally true of both pure and applied logic as something studied by one full of enthusiasm for it. A scientific study of pure dialectic without superstition is surely as genuinely a case of science as was ever the science of theology.

In view of these considerations I prefer to say that pure logic is to be classed as esthetics, and that there are in consequence two types of logic, two types of logical object, and that it is important to distinguish them by different names, important to know what differences in subject-matter these different names imply.

VII

At last I begin to sense a little better what I have been driving at. I began by saying vaguely that it had to do with the word or idea "pattern." A pattern may be the pattern of a fossil leaf or insect, or of living creatures, of a culture long extinct and primitive or highly civilized like that of medieval China, or like some that still survive in New Guinea undisturbed. Or it may be the pattern of a conceptual object, such as the sphere, which may or may not be approximately incorporated in matter, or of an animal long extinct of which only a few bones have been found, and by means of which, because of their if-then forms, zoölogists seek to reconstruct the total pattern. And though subsequent discoveries show the imagined pattern to be wrong, the mistaken idea is no less a pattern of if-then parts.

The solar system and the moon are objects of which the description involves processes in time, i.e., the objects are temporal facts, but their patterns are unchanging patterns.

I may seem to indulge in a paroxysm of terms, and anything like a complete analysis of the concept "pattern" is beyond my power, yet even so, I may say that some types of pattern are more important

in the scene of human values than others, though they are all of the same if-then essence, whether temporal or not, when they are patterns of empirical data—what we have come to speak of as the incorporation or realization of ideas.

Knowing as little as I do about logic, it is my habit to say that all of it is the addition of postulates that can be added together. These postulates may be very elaborate and intricate, and if the conclusion, so far as it is a logical one, is a statement of inference, it is a conditional proposition which is offered as the sum of other conditional ones.

Because terms seem antiquated and shopworn is no reason for discarding them when they do seem the terms we are looking for. So I venture to say that all patterns of empirically existing data must be fragments of the time, the space, or the temporal-spatial of the observable world: such details of pattern as the point, the line, the sphere, the closed curve, the differential, such patterned objects as life, evolution, poetry. And though one does not wish to be misled, there can be no harm in remembering that the pattern of behavior, however enriched, clarified, or clouded by survivals, seeks to conform to the objective pattern of nature or of supernature. Thus, if only to remember their social patterning and without assuming any consciousness of purpose, we can begin our list of temporal patterns with the lives of the bee and the beaver, the conscious logic of behavior in primitive culture, the conscious beginnings of surveying and of architecture in prehistory and very early history.

I neither affirm nor deny that the history of logic should begin in the so-called animal world. And I do not deny that the type of pattern exemplified by the farmer of today may be more important than that exemplified by the wall paper or by the eternally established. Yet without the sequence of the seasons, without the rest of nature's pattern, something of infinite detail, how can there be a patterning of behavior for the sake of the efficiency of adjustment to it?

I have said that in the course of human history two types of logical object have emerged, as the same parents might have both a son and daughter, for which I have suggested the names "applied logic" and "pure logic," as the son and daughter might be called James and Jemima Jones, the last name showing the kinship of the two, as the word "logic" does. Students of natural history study the whole patterning of nature, what I may call the constant scenery of the world; students of efficiency, whether of bees or of men, study the relationship of means and methods to habits, dreams, and other ends. It is very probable that James was born before Jemima, and that he rocked her cradle, a service she ought never to

forget. And it is not unlikely that Jemima has grown more self-centered, more self-conscious than James, less disposed to remember that she is not merely Jemima but Jemima Jones. Why should friends encourage a family quarrel, why should they not try to persuade both young people that neither of them is the whole Jones family, and that in spite of a common ancestry, the pattern of one is not quite identical with the pattern of the other. After all, I only beg their discriminating brothers and sisters to call the one James and the other Jemima, not forgetting the name of parental kinship! And I propose this not as a metaphysician and not, I think, as a logician, but as an instrumentalist.

VIII

You must all have realized that the two types of logic that I have called applied and pure are that defended by Professor Dewey and that advocated by his opponents. Professor Dewey insists, I think always, that logic should be described in terms of its functioning instrumental if-then pattern. His critics insist it be described in terms of its non-functioning, non-instrumental, if-then pattern. With Professor Dewey's point of view I wholly agree in its historical aspect, in its theory of the genesis of logic, and in what I call its own universe of discourse. Nevertheless, philosophy like Hell seems sometimes a mosaic of good intentions misunderstood. And with the best of intentions the ambiguity of important words is a matchless instrument for the genesis of misunderstanding. Like Professor Dewey I am an instrumentalist in what I call instrumentalism's universe of discourse, but as I am also an empiricist, or try to be, I can not help now and then feeling a disposition to relax into something like the repose of contemplation, like an absorption into *die ewigen Wahrheiten.*

I say this because I have been sure for a long time that Professor Dewey's presentation of logic operated with a different universe of discourse, motivated by other considerations, than those that seem inescapable postulates to most students of logic. A few years ago at a course in advanced logic, Professor Dewey's points came up for consideration toward the end of the term. I was told by an extremely competent member of the class that Professor Dewey's phraseology was hardly intelligible to any of the group. They could not make it fit into their vocabulary. I was not there, and so was unable to ask the question whether the fact that Professor Dewey was discussing not pure dialectical logic expressed in a language of symbols, but applied logic born and used by all of us as a human technique for the attainment of specific ends, with its historical genesis, and too, the fact that the whole recent movement called

empiricism was emphatically part of the escape of philosophy from supernaturalism, a realization that the history of philosophy should be not dialectic but history, a chapter in the history of culture—all very unlike the science of pure mathematics—threw any light on Professor Dewey's way of patterning the study of logic.

If, however, we use two words for two types of logical subject-matter, as one distinguishes James Jones from Jemima Jones, and use language as the tool of communication, it seems to me that interest in the efficiency of language in discussion and clarification would make for peace.

* * *

I try to concern myself only with description and not with evaluation, and not at all with metaphysics in the sense of the old academic searching for what is behind the scenes. Yet something occurs to me which seems to be on the fringe of the topic thus far discussed.

We might substitute for the word "pattern" the word "*morphé*," so important in the philosophy of Aristotle, remembering the, to my mind, admirable statement by Santayana, I think in Chapter I of *Reason in Common Sense*, in its first printing: "Plato had no physics and the physics of Aristotle was bad." The study of morphology is the study of biological types or patterns. It might be that without claiming any existential discovery at all, one could speculate, as an esthetic pastime, parallel to musical composition, whether nature as a whole could be conceived as conforming to some one pattern or form. If so, it would not inevitably follow that it could not be conceived as conforming to other patterns. The construction of such a mental picture might make for intellectual economy in the cataloguing of a vast subject-matter.

I have mentioned how the application of logic in the field of human affairs seems to call for a purposive conformity to the pattern of nature then and there, and this conformity is obedience to the principle of cause and effect. Whether free choice exists or not, without the controlling law of cause and effect, there might be any amount of existence, but I do not see how what we mean by nature could possibly exist. For causality need not be materialistic efficacy. Spiritual teleology could take its place if only it operated strictly according to pattern.

As an imaginative mental composition, beginning with all "nature" characterized by the pattern of cause and effect, with the constant patterns of physics, chemistry, and other natural sciences, the life of the bee and of the beaver each with its type of architecture, the conformity of migratory wild life to nature's shifting but repeating pattern, the pattern of primitive behavior, the emergence of various techniques, there seems to be much continuity of pattern

from one end to the other. In some such way the social-ethical pattern of civilization might be mentally generated out of a philosophy of nature such as Hegel's. And did not Hegel, born in the cradle of theology, try to do just this? Much of the data used as evidence is, of course, observed and correctly described. The whole would probably be motivated by tradition and esthetic sensibility, the joy of imaginative composition and the disposition, perhaps, to preach and justify. If there is a continuity of theological type between Hegel's *Naturphilosophie*, his metaphysic, his history of civilization, his history of art and his logic, and if I were still of a somewhat traditional faith, such naturalistic metaphysic of applied logic would have for me a great appeal.

* * *

This paper has been thrown together casually with acute consciousness of how much its writer lacks in the way of information. Anything like completeness of picture is out of the question, and the attempt to manufacture formal continuity would have been dialectical artifice. Of course I do not claim for a moment that the Greeks consciously included in their category of the *aisthetika* all that I have tried to read into the meaning of that term. Philosophers then like most of those today were more interested in apperception than in perception. And though I can not draw the line, except in definition, between logic as technique and logic as vision, I venture the suggestion that they both exist, that they are very different, and that they should be baptized with different names.

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BOOK REVIEWS

Naturwissenschaft und Metaphysik. (*Abhandlungen zum Gedächtnis des 100. Geburtstages von Franz Brentano. Bd. I.*) Brünn/Leipzig: Rudolf M. Rohrer. 1939. 198 pp. 9.50 M.

This volume contains six essays whose chief task is to criticize the theory of relativity and logical positivism from the point of view of Brentano's epistemology and metaphysics. A second volume dealing with problems in psychology, value-theory, and esthetics has been announced.

The first two of these six essays belong together. In the first ("Der Streit um die Deutung der Relativitätstheorie") Reinhold Fürth, a physicist who is not himself a disciple of Brentano, seeks to bring order into the long controversy waged by Oskar Kraus

against the theory of relativity. Fürth indicates the chief sources of philosophic confusion concerning the theory; these he takes to be the fact that philosophers and physicists use terms such as space and time in different senses, and the fact that the nature and methods of philosophy are totally different from those of physical theory. This leads him to his "solution" of the controversy. He feels that the theory of relativity, as a physical theory, must be accepted by all philosophers, regardless of their *a priori* metaphysical views; but that since physics and philosophy possess different methods and goals, no conflict can arise between them. He apparently fails to see that many philosophers (of the most diverse schools) would refuse to admit any such dichotomy of method, and would consequently reject his too tolerant "solution."

In the second essay ("Ueber die Missdeutungen der Relativitätstheorie") Kraus continues his attacks against the upholders of the theory of relativity. That there have been many contradictions in their statements, and that very probably there also are confused aspects to their epistemologies, may, I believe, be granted. Yet Kraus's own pronouncements regarding the proper interpretation of the theory are so polemical in character, and pass so easily over difficult and important problems, that it is no wonder that his colleague Fürth should feel that philosophy and science belong to wholly disparate realms of thought.

In his essay on "Zeitanschauung und Zeitbegriffe," Alfred Kastil gives a careful exposition of the development of Brentano's thought concerning time. This essay is to serve as the introduction to Kastil's edition of some of Brentano's papers, to be issued under the title of *Raum, Zeit und Kontinuum.* It is perhaps due to this fact that Kastil's essay does not really do more than give an abstract exposition of his own and Brentano's views. In no sense does it serve to give an adequate analysis of the relations between "perceptual" and "conceptual" time. That Brentano was a highly important psychologist no one will, I suppose, deny. But that problems such as those concerned with the perception of time should be discussed solely with regard to their place in Brentano's thought seems unjustifiable in an essay which purports to be systematic as well as historical.

The two following essays by Richard Strohal ("Das 'Scheinbare' und das 'Wirkliche' ") and P. F. Linke ("Neupositivismus und Intentionalität") are, to me, the most interesting in the book. Like the Kraus and Kastil essays, they unfortunately stop at the point where one would most like them to continue: they fail to show how a tenable view grows out of their criticism, being content to rely for their positive remarks on the relevant theories held by

Brentano. Yet, in spite of this limitation, it seems to me that both Strohal's criticism of Phillip Frank and of the positivistic conception of the "real," and Linke's fundamental criticism of the epistemology of positivism, merit close attention.

The concluding essay of the book ("Traum, Wirklichkeit, Gott") is a comparison of Brentano's views on how to escape from solipsism with the Cartesian solution of the same problem, and contains a defence of these fundamentally similar attempts. The author, after his comparative study, goes beyond the extant Brentano manuscripts and sets forth what he believes would have been the conclusive argument of a fragment entitled "Solipsism, and its only sound refutation." This contribution by E. Rugge, like the essay by Kastil, adds more to our knowledge of Brentano than to a fresh understanding of the problems involved.

MAURICE MANDELBAUM.

BOOK NOTES

Quod reminiscentur et convertentur ad dominum universi fines terrae (*Psal. XXI*). TOMMASO CAMPANELLA. Volumen Quatripartitum. Tomas Prior. Edidit Romano Amerio. Padova: Cedam. 1939. vii + 273 pp.

Fragments of this work, edited by Kvacala and by Amerio, have already appeared, but this is the first printing of the complete text of the first two of the four books which comprise the manuscript. It is a typical Campanella product, diffuse and rambling, consisting of exhortations, prayers, and philosophical polemics addressed to Christian priests and princes and to Gentile kings.

The opening pages of the first book will be of particular interest to philosophers as an example of the way in which a platonic interpretation of the title of the whole work may be used to provide philosophical sanction for political universalism.

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Epilogo magno (*fisiologia italiano*). TOMMASO CAMPANELLA. Testo italiano inedito con le varianti dei codici e delle edizioni latine. A cura di Carmelo Ottaviano. Roma: Reale Accademia d'Italia. 1939. 605 pp.

Not only Campanella specialists but those interested in Renaissance philosophy will welcome a readily available edition of this work, for it is a summary, not too long or incoherent, of Cam-

panella's philosophy of nature together with adumbrations of some of his chief metaphysical doctrines. This edition is a careful and definitive work, consisting of an introduction containing much bibliographical and other technical material, and an abstract of the text; the text with variant readings; and 33 pages of indices. Its practical value would have been greater had the text been that of the final Latin edition of 1637 (almost unobtainable), and the ms. variants relegated to the notes.

In the introduction Ottaviano holds that the similarity between Campanella and Joachim of Flora "explains" the conflicting elements in the former's life and thought. While the influence of Joachim upon Campanella has certainly been neglected, it is difficult to see how it affords explanation, in any but a superficial sense, of the much-discussed "conflicts."

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Die deutsche Schulmetaphysik des 17. Jahrhunderts. MAX WUNDT. (Heidelberger Abhandlungen zur Philosophie und ihrer Geschichte 29.) Tübingen: J. C. B. Mohr (Paul Siebeck). 1939. xxvi + 288 pp. 14 M.

The author contends that the *representative* philosophy of the seventeenth century was neither the rationalism of Descartes and Spinoza, nor the empiricism of Hobbes or Locke, nor yet the philosophy of Leibniz. It was, rather, that much maligned "philosophy of the schools" which all of these individualistic thinkers took for granted as the "common philosophy."

This scholasticism was not, as is often supposed, a perpetuation of the medieval tradition into modern times. It had a definite historical beginning around the end of the sixteenth century, as a spontaneous renewal of metaphysical studies, in reaction to the antimetaphysical attitude of humanists and reformers. It drew to some extent on the medieval tradition, particularly as represented by Thomas Aquinas; but it turned even more to Aristotle and the Greek tradition, and abandoned the medieval forms of philosophical writing in favor of systematic expository treatises.

Dr. Wundt confines his study of this modern scholasticism to its German phase, though he points out that it was essentially a European intellectual movement. He brings to light a long list of forgotten authors who, throughout the seventeenth century, enjoyed high repute and produced an immense number of treatises and textbooks. The names of Cornelius and Jacob Martini may be familiar to some modern students; but who will remember Sagittarius, Altdorf, Praetorius, Capsius, or Rixner, to mention only a

few? Yet these men were the recognized philosophers of their day, while Descartes, Spinoza, Locke, and Leibniz were only amateurs.

The author suggests that it is historically and philosophically misleading to regard the French and British rationalists and empiricists as the principal point of departure of modern German philosophical speculation. Germans are metaphysicians by nature, and the true significance of the thought of Leibniz, Wolff, Kant, and Hegel is to be found in its attempt to maintain the primacy of *Seinsphilosophie* against those "foreign" influences which tended to reduce philosophy to mathematics and to empirical science. In this enterprise, according to Dr. Wundt, the scholastic metaphysical movement of the seventeenth century played a greatly underestimated part.

E. A. M.

Wilhelm Diltheys Grundlegung einer wissenschaftlichen Lebensphilosophie. CARL THEODOR GLOCK. (Neue Deutsche Forschungen, Band 218.) Berlin: Junker und Dünnhaupt. 1939. 212 pp. 9.50 M.

The author of this work essays the arduous task of presenting in a short compass a critical summary statement of Dilthey's *Lebensphilosophie* pieced together from a multitude of published essays, fragments, letters, and remains. An introductory section is devoted mainly to an exposition of Dilthey's conception of the dependence of philosophy, method, and meaning, upon life and experience (*Erlebnis*). These elements converge to form a positivistic *Geisteswissenschaft* resting rather unsteadily upon a non-naturalistic psychology, which, Dr. Glock explains, unlike atomistic psychology or psycho-physics, is a method which employs hermeneutic categories such as significance, value, purpose, interrelationship, etc. The second section, beginning appropriately with a statement of Husserl's influence on Dilthey, examines a theory of meaning in which Dilthey aims to exhibit the objective truth of life and experience without recourse to scientific positivism or pure logic. There is a pervasive Bergsonian quality in this strand of Dilthey's doctrine. Ineffable immediate experience becomes meaningful only when the integrative act of "reliving" (*nacherleben*) places it into the context of past experience. The multifarious functions of the whole soul are brought to a focus in this act.

In the third section, Dr. Glock expounds Dilthey's view of the relative validity of various objective expressions which the phenomena of life may assume. Art is the most original and genuine expression of life; and Goethe is the supreme artist. At the same time Dilthey seeks to gain a coördinate position for the

philosophical comprehension of life. The "scientific" *Lebensphilosophie* is to have a method and categories all its own—categories which are dynamic, historical, capable of accommodating the welter of changing experiences without distortion. This demand of Dilthey's becomes the nub of Dr. Glock's criticisms, to which the last section of the book is devoted. He points out that whatever has meaning, whether in art, science, or philosophy, is always a construction which goes beyond the immediately given. Moreover, while science and philosophy are forced to recognize the antinomic character of reality, this is in itself a logical conclusion over which logic alone can triumph. A *Lebensphilosophie* which aims to dispense with logico-discursive method can at best be a kind of art, but never a true *Wissenschaft*. Dilthey's attempt to construct a scientific philosophy of life has failed, in Dr. Glock's estimation. Dilthey's great value and contribution consists in the *Anregungen* which he gave—a kind of William James among the Germans.

O. F. K.

OTHER NEW BOOKS AND JOURNALS

Anderson, Louis F.: Logic and the Cosmic Order. God and the Cosmic Order. Psychology and the Cosmic Order. New York: The Theistic Society. 1939. 92 pp.; 157 pp.; 185 pp.

Foxe, A. N.: The Life and Death Instincts. (The Vita and the Fatum.) New York: The Monograph Editions. 1939. 64 pp.

ANALYSIS. Vol. 7, No. 1. Comments on a Recent Version of Phenomenalism: *M. Black.* The Justification of Induction: *M. A. Cunningham.* Some Notes on Assertion: *Casimir Lewy.* Moral Knowledge: *H. B. Acton.*

TIJDSCHRIFT VOOR PHILOSOPHIE. 1e Jaarg., Nr. 4. De Philosophie van het Spel: *P. De Bruin.* De Theorie van den Onbewogen Beweger bij Aristoteles: *I. Dockx.* Schöpfung und Zeugung: Hedwig Conrad-Martius. Kierkegaard en de hedendaagsche existentialisten: *A. De Waelhens.*

REVUE PHILOSOPHIQUE. Année LXIV, Nos. 9 à 12. La Révolution de 1789 et la pensée moderne. Edmund Burke et la Révolution Française: *E. Barker.* L'art et la Révolution: *H. Focillon.* La Révolution de 1789 et quelques courants de la pensée sociale in Russie au XIXe siècle: *G. Friedmann.* Saint-Simon et Auguste Comte devant la Révolution Française: *H. Gouhier.* Fichte et la Révolution Française: *M. Gueroult.* La signification de la Révolution Française dans la "Phenoménologie" de Hegel: *J. Hyppolite.* Hegel et les idées de 1789: *A. Stern.* La Révolution Française et la

pensée juridique: l'idée du règne de la loi: *J. Ray.* Kant et la Révolution Française: *P. Schrecker.*

"A Report on The East-West Philosophers' Conference," University of Hawaii, June 26–August 4, 1939. Oriental Institute Journal. University of Hawaii Bulletin. Volume 19, Number 4. pp. 1–15.

NOTES AND NEWS

The officers of the newly organized International Phenomenological Society are: Marvin Farber, president; Dorion Cairns, vice-president; Richard H. Williams, secretary-treasurer. Members of the Council include Gaston Berger, Eugen Fink, Gerhart Husserl, Felix Kaufmann, Fritz Kaufmann, Ludwig Landgrebe, V. J. McGill, Alfred Schuetz, Herbert Spiegelberg, and John Wild. A regular publication, making use of three languages, is being planned. Inquiries may be addressed to Professor Marvin Farber, University of Buffalo, Buffalo, New York.

The College of the City of New York has announced the appointment of Bertrand Russell as professor of philosophy beginning February, 1941.

Dr. Erich Frank has been appointed as a special lecturer in philosophy at Bryn Mawr College and Swarthmore College for the second semester of the current year. He is now in residence at Bryn Mawr where he is conducting a graduate seminar in Aristotle's Ethics and giving a series of four open lectures on the following topics: Greek Music and Pythagorean Philosophy, Plato's Conception of Philosophy; Augustine and Greek Philosophy; Aristotle and Medieval Philosophy. He will go to Swarthmore College the latter half of the semester to conduct special work there.